This listing of claims will replace all prior versions, and listings, of claims in the application:

The Status of the Claims

1. Cancelled

2. Cancelled

3. Cancelled

4. Cancelled

5. Cancelled

6. Cancelled

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9. Cancelled

10. Cancelled

11. (Original) A method of operating an external cavity optical transmitter including a gain chip and an optical modulator coupled to a temperature controlled substrate having an associated temperature, the method comprising:

maintaining the temperature controlled substrate, the gain chip and the optical modulator between a first temperature and a second temperature between which the optical modulator has an acceptable performance characteristic;

varying the temperature of the temperature controlled substrate, the gain chip and the optical modulator from the first temperature to the second temperature;

measuring an operating current supplied to the gain chip as the temperature of the temperature controlled substrate, the gain chip and the optical modulator varies from the first temperature to the second temperature;

determining an optimum temperature between the first temperature and the second temperature that corresponds to a minimum operating current; and

maintaining the temperature of the temperature controlled substrate, the gain chip and the optical modulator at the optimum temperature.

12. (Original) The method as defined in claim 11, wherein a temperature difference between the first temperature and the second temperature comprises about two degrees Centrigrade.

13. (Original) The method as defined in claim 11, wherein determining an optimum temperature comprises determining operating current as a function of temperature.

14. (Original) The method as defined in claim 13, wherein determining an optimum temperature comprises taking a derivative of the operating current as a function of temperature.

15. (Original) The method as defined in claim 13, wherein determining an optimum temperature comprises taking first and second derivatives of the operating current as a function of temperature.

16. (Original) The method as defined in claim 11, further comprising:

measuring the operating current and comparing it to the minimum operating current; and

if a difference between the operating current and the minimum operating current exceeds a predetermined threshold, (a) varying the temperature of the temperature controlled substrate, the gain chip and the optical modulator from the first temperature to the second temperature, (b) measuring the operating current supplied to the gain chip as the temperature of the temperature controlled substrate, the gain chip and the optical modulator varies from the first temperature to the second temperature, (c) determining a second optimum temperature between the first temperature and the second temperature that corresponds to a second minimum operating current, and (d) maintaining the temperature of the temperature controlled substrate, the gain chip and the optical modulator at the second optimum temperature.

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